Appl. No. 10/809,607
Response Dated December 21, 2007
Reply to Office Action of September 26, 2007

Docket No.: 1020.P18644
Examiner: Laforgia, Christian A.
TC/A.U. 2131

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (Currently Amended) An apparatus, comprising:

a network interface to communicate frames of information in accordance with a wireless protocol; and

a frame authentication module operatively responsive to said network interface, said frame authentication module to authenticate <u>multiple</u> frames communicated by said network interface<u>, with each frame containing authentication information in a spare extension field,</u> or encode <u>multiple</u> frames with authentication information if the frames do not include authentication information.

2.   (Previously Presented) The apparatus of claim 1, wherein said network interface comprises a network interface operable with a Universal Mobile Telecommunication System.

3.   (Original) The apparatus of claim 1, wherein said network interface comprises a network interface configured in accordance with one of an Iub Specification and an Iur Specification.

4.   (Original) The apparatus of claim 1, wherein said wireless protocol comprises a

framing protocol defined by one of an Iub Specification and an Iur Specification.

5.   (Original) The apparatus of claim 1, wherein said authentication module

comprises:

        an authentication encoding module to encode each frame with authentication

information; and

        an authentication decoding module to authenticate each frame using said

authentication information.

6.   (Previously Presented) The apparatus of claim 5, wherein said authentication

encoding module generates said authentication information using an authentication key,

data from said frame, and a change parameter.

7.   (Currently Amended) A system, comprising:

        a node B system having a first network interface;

        a first radio network controller to communicate with said node B system, said first

radio network controller having a second network interface; and

        a frame authentication module for each of said first and second network

interfaces, said frame authentication module to authenticate <u>multiple</u> frames

communicated between said first and second interfaces<u>, with each frame containing</u>

<u>authentication information in a spare extension field,</u> or encode <u>multiple</u> frames with

authentication information if the frames do not include authentication information.

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8.   (Previously Presented) The system of claim 7, wherein said network interfaces each comprise network interfaces operable with a Universal Mobile Telecommunication System.

9.   (Original) The system of claim 7, wherein said network interface comprises a network interface configured in accordance with one of an Iub Specification and an Iur Specification.

10.   (Original) The system of claim 7, wherein each frame authentication module comprises:

        an authentication encoding module to encode each frame with authentication information; and

        an authentication decoding module to authenticate each frame using said authentication information.

11.   (Original) The system of claim 10, wherein said authentication encoding module generates said authentication information using an authentication key, data from said frame, and a change parameter.

12.   (Original) The system of claim 7, further comprising:

        a second radio network controller to communicate with said first radio network controller, said second radio network controller having a third network interface; and

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a frame authentication module for said third network interface, said frame authentication module to authenticate frames communicated between said second and third interfaces.

13.   (Currently Amended) A method, comprising:

receiving a multiple frames of information over a wireless medium;

determining whether each said frame includes authentication information in a spare extension field;

authenticating each said frame using said authentication information; and

encoding said each frame with authentication information if said frame does not include said authentication information.

14.   (Currently Amended) The method of claim 13, wherein said authenticating comprises:

retrieving an authentication key;

duplicating said authentication information using said authentication key;

retrieving said authentication information from said each frame;

comparing said duplicated authentication information with said retrieved authentication information; and

authenticating said each frame in accordance with said comparison.

15.   (Currently Amended) The method of claim 13, wherein said encoding comprises:

generating said authentication information; and

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storing said authentication information in a spare extension field of ~~said~~ each

frame.

16.   (Currently Amended) The method of claim 15, wherein said generating

comprises:

retrieving an authentication key;

retrieving data from ~~said~~ each frame;

retrieving a change parameter; and

creating said authentication information in accordance with an authentication

algorithm using said authentication key, said data, and said change parameter.

17.   (Currently Amended) An article comprising:

a storage medium;

said storage medium including stored instructions that, when executed by a

processor, result in receiving ~~a~~ multiple frames of information over a wireless medium,

determining whether ~~said~~ each frame includes authentication information in a spare

extension field, authenticating ~~said~~ each frame using said authentication information, and

encoding ~~said~~ each frame with authentication information if said frame does not include

said authentication information.

18.   (Currently Amended) The article of claim 17, wherein the stored instructions,

when executed by a processor, further result in said authenticating by retrieving an

authentication key, duplicating said authentication information using said authentication

key, retrieving said authentication information from ~~said~~ each frame, comparing said

duplicated authentication information with said retrieved authentication information, and

authenticating ~~said~~ each frame in accordance with said comparison.

19.   (Currently Amended) The article of claim 17, wherein the stored instructions,

when executed by a processor, further result in said encoding by generating said

authentication information, and storing said authentication information in a spare

extension field of ~~said~~ each frame.

20.   (Currently Amended) The article of claim 19, wherein the stored instructions,

when executed by a processor, further result in said generating by retrieving an

authentication key, retrieving data from ~~said~~ each frame, retrieving a change parameter,

and creating said authentication information in accordance with an authentication

algorithm using said authentication key, data, and change parameter.